

Marine ichthyo diversity in east coast of Sri Lanka: Special reference to Batticaloa District

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Abstract

Sri Lanka is an island, located in the Indian Ocean with a narrow continental shelf, extending about 30,000 sq. km, which is rich in marine species diversity. The prime objectives of the study were to assess the ichthyofaunal diversity in selected locations in East coast of Sri Lanka and to find the threats as well as to suggest the conservation measures to ensure the continued existence of the marine fish community. The study was carried out from January 2017 to December 2017 on a monthly basis. Ten different locations named as Kallar, Kaluwanchikudi, Cheddipalayam, Palamunai, Kallady, Palameenmadu, Savukkady, Kaluwankerni, Mankerni and Kathiraveli were selected for systematic survey by means of accessibility, major beach seining and boat landing sites within the 113 km long coastline of Batticaloa District. Samples were collected from fishermen using various gear such as beach seine, gillnet, long line and cast net at different strata. In addition to ensure the entire species community, discarded unconsumed fish were also collected at each sampling sites. Fishes were identified at least up to the generic level using available taxonomic key of fishes. About 129 fish species belonging to 50 families were recorded. Carangidae was the most dominant and diverse family represented by 13 species. Twenty one species were recorded in all sampling locations. Species composition was high in Palameenmadu where 103 species out of 129 species were recorded in this location. The lowest distribution was in Kaluwanchikudy with 48 species. Distribution of *Choerodon sp.*, *Plectorhynchus pictus*, *Cephalopholis aurantia* and *Rhabdosargus sarba* were restricted to Palameenmadu and *Trachinocephalus myops* to Mankerni. *Anguilla bicolor*, *Gymnura poecilura*, *Epinephelus coioides*, *pinephelus malabaricus* are categorized as near threatened and *Himantura uarnak* as vulnerable. *Caranx sexfasciatus*, *Scomberoides tol*, *Amblygaster sirm*, *Sardinella albella* and *Sardinella gibbosa* were highly abundant and economically important commercial species. Even though pollution was minimal, threats for the fish community in these sites included the use of under mesh sized nets, by-catch of non-target species specially *Diodon hystrix* and *Triacanthus nieuhofii*. Proper monitoring activities, implementation of by-catch reducing techniques and other conservation measures are necessary to ensure the future existence of ichthyofaunal diversity.

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